

Amendments to the Specification

Please add the following new heading before paragraph [0001]:

BACKGROUND

Please add the following new heading before paragraph [0004]:

SUMMARY OF THE INVENTION

Please replace paragraph [0004] with the following amended paragraph:

[0004] ~~It is, therefore, the~~ An object of the present invention is to devise a pump which will overcome these disadvantages.

Please replace paragraph [0007] with the following amended paragraph:

[0007] In addition, a pump is preferred in which the piston has altogether three collars. This has the advantage that the first and the third ~~webs~~ collars may guide the piston as so-called piston-guide ribs, without being subjected to erosion by outflowing fluid, while the second collar which forms the control edge of the valve piston, may, in fact, be subjected to a certain erosion by the flow, but is not required to assume the guide functions of the first and third collars.

Please add the following new heading before paragraph [0010]:

BRIEF DESCRIPTION OF THE DRAWINGS

Please add the following new heading before paragraph [0013]:

DETAILED DESCRIPTION

Please replace paragraph [0014] with the following amended paragraph:

[0014] FIG. 2 shows a valve piston 30 according to the present invention. Those features having the same structure as in FIG. 1, such as piston bore 3, pump housing 5, outflow bores 13 in the pump housing, control edge 15 on middle piston collar 17, as well as guide collar 19, have the same functions as in FIG. 1 and are, therefore, provided with the same reference numerals. The features that have been modified on the piston according to the present invention in

comparison with FIG. 1 are provided with new reference numerals. Piston 30 has a cylindrical axial inflow orifice 32. Compared to the related art, circumferential outflow groove 31 has a completely different groove shape. It begins in region 33 with a relatively shallow radial depth and continues axially, slightly conically towards control edge 15. As a result, a substantially larger diameter 34 is obtained as compared to diameter 23 from FIG. 1, with the result that the diameters of outflow orifices 35 may be substantially larger than under the related art, while webs 36 characterized by adequate stability are retained. However, to achieve an adequate depth of circumferential outflow groove 31 in the area of control edge 15, the outflow groove in this area is expanded by a radially inwardly extending arc 37 until it reaches its greatest depth 39. Thus, as a result of these features, given a great enough depth of the circumferential outflow groove, a relatively large diameter 41 of radial outflow orifices 35 is achieved, which leads to substantially low resistances and thus to flows whose lossless characteristics are correspondingly enhanced and to an improved charging of the pump. Based on the pattern of flow threads 43, it is discernible precisely in the area of radial outflow orifices 35 that the flow threads may be spaced further apart from one another, and thus the flow pattern is not as compressed as in FIG. 1. Surprisingly, the embodiment of valve piston 30 in accordance with the present invention makes it possible for the charging pressure on the intake side of the pump to be raised from approximately 0.2 bar to 0.5 bar and thus for the pump's cavitation danger to be substantially reduced.

Please add the following three new paragraphs after paragraph [0014]:

[0014.1] In addition, FIG. 2 shows a valve piston 30 that has altogether three collars 17, 18 and 19. This has the advantage that the first and the third collars 19 and 18 may guide the piston 30 as so-called piston-guide ribs, without being subjected to erosion by outflowing fluid, while the second collar 17, which forms the control edge 15 of the valve piston 30, may, in fact, be subjected to a certain erosion by the flow, but is not required to assume the guide functions of the first and third collars 19 and 18.

[0014.2] Furthermore, FIG. 2 shows a valve piston 30 in which the collars 17, 18 and 19 have circumferential pressure-equalization grooves 20. Here the advantage is derived that, even given an asymmetrical seating of the piston 30 in the bore 3 and resultant differences in pressure

conditions on the piston circumference, the pressures are able to be compensated by the pressure-equalization grooves 20 to prevent the piston from locking hydraulically.

[0014.3] Additionally, the embodiment of valve piston 30 in accordance with the present invention makes it possible for the charging pressure on the intake side of the pump to be raised from approximately 0.2 bar to 0.5 bar and thus for the pump's cavitation danger to be substantially reduced.

Please replace the heading on page 6 with the following heading:

~~Patent claims:~~ WHAT IS CLAIMED IS: